

AXIAL CAPACITY OF PILES SUPPORTED ON INTERMEDIATE GEOMATERIALS

Kick-Off Meeting Minutes

Date: April 20, 2006
Location: MDTCNF ISD Conference Room
Attendees: MSU: Bob Mokwa, Eli Cuelho, Steve Perkins, Heather Brooks
MDT: Sue Sillick, Cameron Kloberdanz, Amanda Murphy, Kent Barnes, Fred Beal
Notes by: Bob Mokwa

Minutes:

1. Initial discussions regarding the overall project approach focused on LRFD issues brought up by Cameron. It was decided that at this time, the impact of LRFD on the research project is not clear. The research team will proceed with the tasks as proposed. The researchers will strive to keep the study in a context such that results will be in a form that does not preclude their use in LRFD analyses. The researchers recognize that flexibility is important, and to the extent possible, the researchers will keep abreast of new design and analysis methods that may evolve during implementation of LRFD over the next two years.
2. It was discussed that the primary research goal should involve developing strength parameter recommendations for intermediate geomaterials (IMG), with a secondary emphasis on computer program (DRIVEN, GRLWEAP, etc.) input values. In this manner, the information gained from the study will be equally useful in both working stress and LRFD approaches.
3. Cameron and Amanda were not confident they would be able to find useful data from 12 different projects. They will look into this in more detail. It was decided that 12 is not a magic number, but a good target. Bob would prefer more, if available. Data collection will involve coordination between MDT Geotech and Construction. Ideally, the projects selected will provide a good representation of the types of IGM that are typically encountered in Montana. The challenge will be to locate projects that involved piles driven into IGM with PDA test results.
4. It was mentioned that Cory Rice of SK Geotechnical-Billings may have a list of MDT projects that used the PDA. Cameron will check with him, if necessary. Cory may have information on non-MDT projects in which the PDA was used. The project client/owner would have to be contacted to obtain this information. This is a possible fall-back if not enough suitable MDT projects are available.
5. Heather will assist in gathering records and data at MDT Helena on June 19. Heather will contact (Cameron, Amanda, Rich ?) on June 15, after she returns from vacation to confirm meeting. Bob will be attending out of town and conferences and on vacation from May 31 to June 19.

6. It was briefly discussed that useful components of the project records include:
 - a. foundation reports (+ soil lab and field test results)
 - b. pile driving construction records (blow counts, pile set, etc.)
 - c. pile driving analysis records (PDA, CAPWAP)
 - d. calculations, analyses, etc.
 - e. project plans and specifications
7. Fred mentioned that the FHWA static load test database may contain some useful information. MSU researchers will look into this.
8. Cameron requested that it be documented in the results whether spiral or straight welds were used for steel pipe piles. Discussions ensued whether this information would be available in the records and whether the construction project supervisors would have knowledge regarding weld type. The supplier may have to be contacted to confirm the weld-type used during manufacturing. No definite conclusions were reached on this matter.
9. For this project, Cameron questioned the value and cost-effectiveness of producing written Quarterly Progress Reports (QPRs). Kent suggested replacing every other written QPR with a conference call between the MSU researchers and the MDT research panel. This idea was well-received. The first conference call was tentatively scheduled for the first week of October. The call preferably will be scheduled for a Tuesday or Thursday to accommodate Bob's teaching schedule. Written QPRs will thus be submitted on a semi-annual basis, based on calendar year.

Action Items

- a) MSU researchers will begin the literature review.
- b) Amada will e-mail Bob the reference from an NCHRP (2005) paper that addressed deep foundations in IMG.
- c) Between now and June 19, Cameron and Amanda will begin putting together a list of potential projects with input from Rich Jackson and others in the geotech group.
- d) On June 19, Heather will travel to Helena to assist with project record collection.
- e) Sue will schedule the first quarterly progress conference call for the first week of October.